

What is claimed is:

1. A method for managing interests and/or communications of a client associated with a subject user among multiple users in a shared network environment for efficiently using available data transmission capabilities and/or providing to a user associated with the client efficient communications access to interesting other users and information, the method comprising operations of:
  - establishing a connection and a context with an interactivity server over a computer network;
  - negotiating an interest expression with the interactivity server based on information relating to the subject user and based on available bandwidth and network traffic; and
  - enabling, based on said interest expression, transmission to the client of interesting entities, and filtering of uninteresting entities.
2. The method of Claim 1, the method comprising a further operation of enabling transmission to other users having an interest in the subject user information relating to the subject user, and filtering transmission to other users not having an interest in the subject user said information relating to the subject user.
3. The method of any of Claims 1 or 2, the method comprising further operations of:
  - sending dynamic interest update information to the server; and
  - negotiating an updated interest expression based at least in part on said dynamic interest update information, and on available bandwidth and network traffic.
4. The method of Claim 3, the method comprising a further operation of enabling, based on said updated interest expression, transmission to the client of additional interesting entities, and filtering of now uninteresting

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entities of said previously interesting entities based on said previous interest expression.

5. The method of Claim 4, the method comprising a further operation of enabling, based on said updated interest expression, transmission to additional other users now having an interest in the subject user information relating to the subject user, and filtering transmission to other users previously having an interest in the subject user based on said previous interest expression said information relating to the subject user.

6. The method of any of Claims 1 or 2, the method comprising a further operation of receiving dynamic updates from or relating to said interesting entities.

7. The method of any of Claims 1 or 2, the method comprising a further operation of receiving interesting generalized information from said uninteresting entities.

8. The method of any of Claims 1 or 2, the method comprising a further operation of enabling, based on said interest expression, transmission to the client of now interesting entities, who were previously uninteresting, based on updated information relating to said previously uninteresting entities.

9. The method of any of Claims 1 or 2, the method comprising a further operation of enabling, based on said interest expression, filtering of now uninteresting entities, who were previously interesting, based on updated information relating to said previously interesting entities.

10. The method of any of Claims 1 or 2, the method comprising a further operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.



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information relating to the subject user, and filtering transmission to other users not having an interest in the subject user said information relating to the subject user.

18. The method of Claim 16, the method comprising a further operation of selecting another client as said host.

19. The method of Claim 17, the method comprising a further operation of selecting another client as said host.

20. The method of any of Claims 1-2 or 16-17 or 19, the method comprising further operations of:

- generating dynamic interest update information; and
- sending said dynamic interest update information to interested other users.

21. The method of any of Claims 1-2 or 16-18, the method comprising a further operation of receiving dynamic interest update information from interesting other entities.

22. A method for managing communications among multiple clients in a shared network environment using an interactivity server for efficiently using available data transmission capabilities for providing to users within said environment connected to the interactivity server efficient communications access to interesting other users and information, the method comprising operations of:

- establishing a connection and a context with a client over a computer network;
- negotiating an interest expression with said client based on information relating to a subject user associated with said client, and based on available bandwidth and network traffic; and

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permitting, based on said interest expression, transmission to the client of entities, while filtering uninteresting entities.

23. The method of Claim 22, the method comprising a further operation of permitting transmission to other users having an interest in the subject user information relating to the subject user, while filtering said information relating to the subject user from being transmitted to other users not having an interest in the subject user.

24. The method of any of Claims 22 or 23, the method comprising further operations of:

receiving dynamic interest update information from the client; and  
negotiating an updated interest expression based at least in part on said dynamic interest update information, and on available bandwidth and network traffic.

25. The method of Claim 24, the method comprising a further operation of permitting, based on said updated interest expression, transmission to the client of additional interesting entities, and filtering of now uninteresting entities of said previously interesting entities based on said previous interest expression.

26. The method of Claim 25, the method comprising a further operation of permitting, based on said updated interest expression, transmission to additional other users now having an interest in the subject user information relating to the subject user, and filtering transmission to other users previously having an interest in the subject user based on said previous interest expression said information relating to the subject user.

27. The method of any of Claims 22 or 23, the method comprising a further operation of permitting transmission of dynamic updates to said client from or relating to said interesting other entities.

28. The method of any of Claims 22 or 23, the method comprising a further operation of permitting transmission of interesting generalized information to said client from said uninteresting other entities.
29. The method of any of Claims 22 or 23, the method comprising a further operation of permitting, based on said interest expression, transmission to the client of now interesting entities, who were previously uninteresting, based on updated information relating to said previously uninteresting other entities.
30. The method of any of Claims 22 or 23, the method comprising a further operation of permitting, based on said interest expression, filtering of now uninteresting entities, who were previously interesting, based on updated information relating to said previously interesting other entities.
31. The method of any of Claims 22 or 23, the method comprising a further operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.
32. The method of Claim 31, the method comprising a further operation of incorporating a mark-up language object within said three-dimensional viewing environment.
33. The method of any of Claims 22 or 23, wherein said information relating to said subject user includes a boolean expression input by said subject user.
34. The method of any of Claims 22 or 23, wherein said information relating to said subject user includes interactions of said subject user with other users.
35. The method of any of Claims 22 or 23, wherein said information relating to said subject user includes preferences of said subject user.

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36. The method of any of Claims 22 or 23, wherein said information relating to said subject user includes past activities of said subject user.

37. A client software program running on a computer associated with a subject user connected to a network including other computers associated with multiple other users of a shared virtual environment for efficiently using available data transmission capabilities for providing to the subject user efficient communications access to interesting other entities, the program providing instructions to one or more processors of the client computer to perform operations of:

establishing a connection and a context with an interactivity server over a computer network;

negotiating an interest expression with the interactivity server based on information relating to the subject user, and based on available bandwidth and network traffic; and

enabling, based on said interest expression, transmission to the client of interesting entities, and filtering of uninteresting entities.

38. The software program of Claim 37, further providing instructions to the one or more processors of the client computer to perform an operation of enabling transmission to other users having an interest in the subject user information relating to the subject user, and filtering transmission to other users not having an interest in the subject user said information relating to the subject user.

39. The software program of any of Claims 37 or 38, further providing instructions to the one or more processors of the client computer to perform operations of:

sending dynamic interest update information to the server; and

negotiating an updated interest expression based at least in part on said dynamic interest update information, and on available bandwidth and network traffic.

40. The software program of Claim 39, further providing instructions to the one or more processors of the client computer to perform an operation of enabling, based on said updated interest expression, transmission to the client of additional interesting entities, and filtering of now uninteresting entities of said previously interesting entities based on said previous interest expression.

41. The software program of Claim 40, further providing instructions to the one or more processors of the client computer to perform an operation of enabling, based on said updated interest expression, transmission to additional other users now having an interest in the subject user information relating to the subject user, and filtering transmission to other users previously having an interest in the subject user based on said previous interest expression said information relating to the subject user.

42. The software program of any of Claims 38 or 39, further providing instructions to the one or more processors of the client computer to perform an operation of receiving dynamic updates relating to said interesting other entities.

43. The software program of any of Claims 38 or 39, further providing instructions to the one or more processors of the client computer to perform an operation of receiving interesting generalized information from said uninteresting other entities.

44. The software program of any of Claims 38 or 39, further providing instructions to the one or more processors of the client computer to perform an operation of enabling, based on said interest expression, transmission to the client of now interesting entities, who were previously uninteresting, based on updated information relating to said previously uninteresting entities.

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45. The software program of any of Claims 38 or 39, further providing instructions to the one or more processors of the client computer to perform an operation of enabling, based on said interest expression, filtering of now uninteresting other entities, who were previously interesting, based on updated information relating to said previously interesting other entities.

46. The software program of any of Claims 38 or 39, further providing instructions to the one or more processors of the client computer to perform an operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.

47. The software program of Claim 46, further providing instructions to the one or more processors of the client computer to perform an operation of incorporating a mark-up language object within said three-dimensional viewing environment.

48. The software program of any of Claims 38 or 39, wherein said information relating to said subject user includes a boolean expression input by said subject user.

49. The software program of any of Claims 38 or 39, wherein said information relating to said subject user includes interactions of said subject user with other users.

50. The software program of any of Claims 38 or 39, wherein said information relating to said subject user includes preferences of said subject user.

51. The software program of any of Claims 38 or 39, wherein said information relating to said subject user includes past activities of said subject user.

52. A software program for managing interests and/or communications of a client associated with a subject user among multiple users in a shared

network environment for efficiently using available data transmission capabilities and/or providing to a user associated with the client efficient communications access to interesting other users and information, the program providing instructions to one or more processors of the client computer to perform operations of:

- establishing a connection and a context with a host over a computer network;

- negotiating an interest expression with the host based on information relating to the subject user and based on available bandwidth and network traffic; and

- enabling, based on said interest expression, transmission to the client of interesting entities, and filtering of uninteresting entities.

53. The software program of Claim 52, further providing instructions to the one or more processors of the client computer to perform an operation of enabling transmission to other users having an interest in the subject user information relating to the subject user, and filtering transmission to other users not having an interest in the subject user said information relating to the subject user.

54. The software program of Claim 52, further providing instructions to the one or more processors of the client computer to perform an operation of selecting another client as said host.

55. The software program of Claim 53, further providing instructions to the one or more processors of the client computer to perform an operation of selecting another client as said host.

56. The software program of any of Claims 38-39, 52-53 or 55, further providing instructions to the one or more processors of the client computer to perform operations of:

- generating dynamic interest update information; and

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sending said dynamic interest update information to interested other entities.

57. The software program of any of Claims 38-39, or 52-54, further providing instructions to the one or more processors of the client computer to perform an operation of receiving dynamic interest update information from interesting other entities.

58. A server software program running on an interactivity server computer connected to a network including other computers associated with multiple users of a shared virtual environment for efficiently using available data transmission capabilities for providing to each user efficient communications access to interesting other entities, the program providing instructions to one or more processors of the server computer to perform operations of:

establishing a connection and a context with a client over a computer network;

negotiating an interest expression with said client based on information relating to a subject user associated with said client, and based on available bandwidth and network traffic; and

permitting, based on said interest expression, transmission to the client of interesting entities, while filtering uninteresting entities.

59. The software program of Claim 58, further providing instructions to the one or more processors of the server computer to perform an operation of permitting transmission to other users having an interest in the subject user information relating to the subject user, while filtering said information relating to the subject user from being transmitted to other users not having an interest in the subject user.

60. The software program of any of Claims 58 or 59, further providing instructions to the one or more processors of the server computer to perform operations of:

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receiving dynamic interest update information from the client; and  
negotiating an updated interest expression based at least in part on  
said dynamic interest update information, and on available bandwidth and  
network traffic.

61. The software program of Claim 60, further providing instructions to the  
one or more processors of the server computer to perform an operation of  
permitting, based on said updated interest expression, transmission to the  
client of additional interesting entities, and filtering of now uninteresting  
entities of said previously interesting entities based on said previous interest  
expression.

62. The software program of Claim 61, further providing instructions to the  
one or more processors of the server computer to perform an operation of  
permitting, based on said updated interest expression, transmission to  
additional other users now having an interest in the subject user information  
relating to the subject user, and filtering transmission to other users previously  
having an interest in the subject user based on said previous interest  
expression said information relating to the subject user.

63. The software program of any of Claims 58 or 59, further providing  
instructions to the one or more processors of the server computer to perform  
an operation of permitting transmission of dynamic updates to said client  
relating to said interesting other entities.

64. The software program of any of Claims 58 or 59, further providing  
instructions to the one or more processors of the server computer to perform  
an operation of permitting transmission of interesting generalized information  
to said client from said uninteresting other entities.

65. The software program of any of Claims 58 or 59, further providing  
instructions to the one or more processors of the server computer to perform

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an operation of permitting, based on said interest expression, transmission to the client of now interesting entities, who were previously uninteresting, based on updated information relating to said previously uninteresting other entities.

66. The software program of any of Claims 58 or 59, further providing instructions to the one or more processors of the server computer to perform an operation of permitting, based on said interest expression, filtering of now uninteresting entities, who were previously interesting, based on updated information relating to said previously interesting other entities.

67. The software program of any of Claims 58 or 59, further providing instructions to the one or more processors of the server computer to perform an operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.

68. The software program of Claim 67, further providing instructions to the one or more processors of the server computer to perform an operation of incorporating a mark-up language object within said three-dimensional viewing environment.

69. The software program of any of Claims 58 or 59, wherein said information relating to said subject user includes a boolean expression input by said subject user.

70. The software program of any of Claims 58 or 59, wherein said information relating to said subject user includes interactions by said subject user with other users.

71. The software program of any of Claims 58 or 59, wherein said information relating to said subject user includes preferences of said subject user.

72. The method of any of Claims 58 or 59, wherein said information relating to said subject user includes past activities of said subject user.

73. A computer network running software for allowing multiple users to communicate in a shared virtual environment while efficiently using available data transmission capabilities for providing to each user efficient communications access to interesting other entities, comprising:

an interactivity server; and

a plurality of client computers each connected to each other and said interactivity server, wherein said software provides instructions for processors of said interactivity server and each client computer to perform operations of:

establishing a connection and a context between said server and said  
each client computer;

negotiating an interest expression of said each client based on information relating to a subject user associated with said each client, and based on available bandwidth and network traffic;

permitting transmission to said each client of interesting entities, while filtering uninteresting entities.

74. The computer network of Claim 73, said software further providing instructions to the one or more processors to perform an operation of permitting transmission to other users having an interest in the subject user information relating to the subject user, while filtering said information relating to the subject user from being transmitted to other users not having an interest in the subject user.

75. The computer network of any of Claims 73 or 74, said software further providing instructions to the one or more processors to perform operations of:

permitting transmission of dynamic interest update information from the client; and

77. The computer network of Claim 76, said software further providing instructions to the one or more processors to perform an operation of permitting, based on said updated interest expression, transmission to additional other users now having an interest in the subject user information relating to the subject user, and filtering transmission to other users previously having an interest in the subject user based on said previous interest expression said information relating to the subject user.

79. The computer network of any of Claims 73 or 74, said software further providing instructions to the one or more processors to perform an operation of permitting transmission of interesting generalized information to said client from said uninteresting other entities.

80. The computer network of any of Claims 73 or 74, said software further providing instructions to the one or more processors to perform an operation of permitting, based on said interest expression, transmission to the client of

now interesting entities, who were previously uninteresting, based on updated information relating to said previously uninteresting other entities.

81. The computer network of any of Claims 73 or 74, said software further providing instructions to the one or more processors to perform an operation of permitting, based on said interest expression, filtering of now uninteresting other entities, who were previously interesting, based on updated information relating to said previously interesting other entities.

82. The computer network of any of Claims 73 or 74, said software further providing instructions to the one or more processors to perform an operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.

83. The computer network of Claim 82, said software further providing instructions to the one or more processors to perform an operation of incorporating a mark-up language object within said three-dimensional viewing environment.

84. The computer network of any of Claims 73 or 74, wherein said information relating to said subject user includes a boolean expression input by said subject user.

85. The computer network of any of Claims 73 or 74, wherein said information relating to said subject user includes interactions by said subject user with other users.

86. The computer network of any of Claims 73 or 74, wherein said information relating to said subject user includes preferences of said subject user.



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87. The computer network of any of Claims 73 or 74, wherein said information relating to said subject user includes past activities of said subject user.

88. A computer network running software for allowing multiple users to communicate in a shared virtual environment while efficiently using available data transmission capabilities for providing to each user efficient communications access to interesting other entities, comprising:

a plurality of client computers each connected within the network, wherein said software provides instructions for at least one processor of each client computer to perform operations of:

establishing a connection and a context between a host and said each client computer;

negotiating an interest expression of said each client based on information relating to a subject user associated with said each client, and based on available bandwidth and network traffic;

enabling transmission to said each client of interesting entities, while filtering uninteresting entities.

89. The computer network of Claim 88, said software further providing instructions to the at least one processor to perform an operation of enabling transmission to other users having an interest in the subject user information relating to the subject user, while filtering said information relating to the subject user from being transmitted to other users not having an interest in the subject user.

90. The computer network of any of Claims 88 or 89, said software further providing instructions to the one or more processors to perform operations of:

enabling transmission of dynamic interest update information from the client; and

negotiating an updated interest expression based at least in part on said dynamic interest update information, and on available bandwidth and network traffic.

91. The computer network of Claim 90, said software further providing instructions to the at least one processor to perform an operation of enabling, based on said updated interest expression, transmission to the client of additional interesting entities, and filtering of now uninteresting entities of said previously interesting entities based on said previous interest expression.

92. The computer network of Claim 91, said software further providing instructions to the at least one processor to perform an operation of enabling, based on said updated interest expression, transmission to additional other users now having an interest in the subject user information relating to the subject user, and filtering transmission to other users previously having an interest in the subject user based on said previous interest expression said information relating to the subject user.

93. The computer network of any of Claims 88 or 89, said software further providing instructions to the one or more processors to perform an operation of enabling transmission of dynamic updates to said client relating to said interesting other entities.

94. The computer network of any of Claims 88 or 89, said software further providing instructions to the at least one processor to perform an operation of enabling transmission of interesting generalized information to said client from said uninteresting other entities.

95. The computer network of any of Claims 88 or 89, said software further providing instructions to the at least one processor to perform an operation of enabling, based on said interest expression, transmission to the client of now

97. The computer network of any of Claims 88 or 89, said software further providing instructions to the one or more processors to perform an operation of generating a three-dimensional viewing environment to facilitate user interfacing with said multi-user shared virtual environment.

98. The computer network of Claim 97, said software further providing instructions to the one or more processors to perform an operation of incorporating a mark-up language object within said three-dimensional viewing environment.

99. The computer network of any of Claims 88 or 89, wherein said information relating to said subject user includes a boolean expression input by said subject user.

100. The computer network of any of Claims 88 or 89, wherein said information relating to said subject user includes interactions of said subject user with other users.

101. The computer network of any of Claims 88 or 89, wherein said information relating to said subject user includes preferences of said subject user.

